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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,854

09/13/2005

Kazuyuki Watanabe

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20575

7590

04/28/2006

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EXAMINER

THOMPSON, TIMOTHY J

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/531,854

Applicant(s)

WATANABE ET AL.

Examiner

Timothy J. Thompson

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3 and 6 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)


- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 which depends from claim 1 states that the first lens support member moves, however, claim 1 states that the first lens support member ~~is~~ ^{is} fixed. 

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohno(U.S. Pat. No. 6,040,949).

Regarding claim 1, Ohno discloses a lens drive apparatus for moving lenses in a lens unit having an optical zoom function for use in an ultra miniature camera(abstract and fig 1) which uses lenses having an optically effective lens diameter of 7 mm or less(Derwent abstract and table 4), first and second lens support members arranged in

the front and back(fig 1, G1, G3); wherein each of said first and second lens members holds a prescribed number of lenses(fig 1, G1, G3); said first lens support member is fixed(fig 1); said second lens support member is made movable in the forward and backward directions(fig 1), and is constructed so as to stop at two prescribed positions in the forward and backward directions; whereby it is possible to switch between two kinds of zoom magnification(fig 1, table 1 the telephoto and wide angle end).

Regarding claim 7, Ohno discloses lens drive apparatus for moving lenses in a lens unit having an optical zoom function for use in an ultra miniature camera which uses lenses having an optically effective lens diameter of 7 mm or less, comprising: first and second lens support members arranged in the front and back; wherein each of said first and second lens members holds a prescribed number of lenses; said first lens support member is fixed; said second lens support member is made movable in the forward and backward directions, is constructed so as to stop at two fixed positions in the forward and backward directions, and is driven to move a minute distance at said fixed positions; whereby it is possible to carry out operations which change optical zoom and focus.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno(U.S. Pat. No. 6,040,949) as applied to claim 1 above, and further in view of Himmelsbach(U.S. Pat. No. 4,008,951).

Regarding claim 4, Ohno discloses the movement of at least one of said first lens support member and said second lens support member is carried out based on the output of a stepping motor. However, Himmelsbach discloses the movement of at least one of said first lens support member and said second lens support member is carried out based on the output of a stepping motor(fig 1, 8, col 3, lines 25-28). It would have been obvious to one skilled in the art at the time of the invention to used a stepping motor to move the second lens unit as shown by Himmelsbach, in the lens device of Ohno, since as shown by Himmelsbach stepping motors are commonly used for driving the lens.

Claim 8 and 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno(U.S. Pat. No. 6,040,949).

Regarding claims 8 and 9 Ohno does not disclose the minute movement at said fixed positions canies out movement by a feed pitch less than or equal to 50 gm for at least a 600 gm section front and back or the feed pitch of said minute movement is made less than or equal to several um. It would have been obvious to one skilled in the art at the time of the invention to set the minute movement at said fixed positions carries out movement by a feed pitch less than or equal to 50 gm for at least a 600 gm section front and back or the feed pitch of said minute movement is made less than or equal to several um, since it has been held that where the general condition of a claim are

disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno(U.S. Pat. No. 6,040,949) and Himmelsbach(U.S. Pat. No. 4,008,951) as applied to claim 7 above, and further in view of Tu et al.(U.S. Pat. No. 6,570,717).

Regarding claim 10, a modified Ohno discloses a stepping motor is used as a drive source in drive means for moving said second lens support member. A modified Ohno et al. does not disclose a lead screw is provided on the output shaft of the stepping motor, a lead nut is provided at a corresponding position of said second lens support member, and a linear operation is carried out by connecting the lead screw and the lead nut.

Regarding claim 11, a modified Ohno does not discloses stepping motor is a flat type in which steps are arranged on the left and right of the rotor although Ohno discloses a stepping motor. It would have been obvious to one skilled in the art at the time of the invention to use a stepping motor with a flat type in which steps are arranged on the left and right of the rotor since the examiner takes Official Notice of the equivalence of simply a stepping motor and a stepping motor is a flat type in which steps are arranged on the left and right of the rotor for their use in the lens art and the selection o any of these known equivalents to a stepping motor is a flat type in which steps are arranged on the left and right of the rotor would be within the level of ordinary skill in the art..

Allowable Subject Matter

Claims 2, 3, 6 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularity or in combination fails to anticipate or fairly suggest the limitations of the independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 2, 3, with the allowable features being the specifics to the movement of the lens system in addition to the conditional formula pertaining to effective lens diameter(claims 2 and 3). Therefore claims 2, 3, 6 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. The examiner can normally be reached on 8:30 AM - 6:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Timothy Thompson". The signature is fluid and cursive, with the first name "Timothy" and last name "Thompson" clearly distinguishable.

**TIMOTHY THOMPSON
PRIMARY EXAMINER**